

NOT TO BE REMOVED  
FROM OFFICE.  
REPORT ON

MR ~~McCarthy~~  
1902-14

GEOLOGICAL SURVEY OF WYOMING  
MINE.

THE ELK MOUNTAIN PROSPECT.

Owned by The Elk Mountain Mining and Milling Company.

Principal office, Encampment, Wyoming.

Officers:

President, T.R. Smith, Encampment, Wyo.

Vice President, R.O. Kaylor, Eton Rapids, Michigan,

Secretary,

Treasurer, S.E. Phelps, Encampment, Wyo.

Location, In Sections 22, 23 & 28; T. 19 N.; R. 32 W. Wyoming.

HERBER PLATTE Mining District, Carbon County, Wyoming.

Name and address of Superintendent, W.R. Wilcox, Saratoga, Wyoming.

Number of lode Claims, Three containing 40 acres.

Names of lode Claims, Monitor, Azurite and Big Springs.

Land Placer Claims, One, Section 23, T. 19 N. R. 32 W. containing 640 acres.

Mill Sites, None located but land available. acres.

Total number of acres in group, 680 acres.

Title, Lode claims by location and Discovery. Land claim by purchase from The Union Pacific R.R. Co. by T.R. Smith and S.E. Phelps for the Elk Mtn. M. & M. Co. as per books of this Company.

Lien or encumbrance, None.

Title guaranteed by Not Insured.

Nearest railroad station Walcott, on U.P.R.R. Distance, about 18 miles, in a northerly direction.

Reached by Wagon road from either Walcot or Saratoga. Either road gives a down grade practically all the way and with slight expense may kept in good condition for hauling all the year.

Altitude at railroad station, About 7000 feet above sea level.

Altitude at main workings, " 7300 " " " " .

Character of country rock of Elk Mountain is granite and some schist, but at workings is limestone as hereinafter described.

Character of wall, of present vein, is limestone.

Character of vein, The vein shown in the workings is evidently one of a series of fractures in the limestone having a general northerly and southerly trend, parallel to the main Elk Mountain uplift.

The vein material is principally limestone from the surrounding formations that has filled into the fracture and more or less crushed and altered by movements in the adjacent rocks and by water action, as evidenced by the present vein filling, gouge etc, all more or less stained by iron and copper oxides and carbonates.

In common with all veins of this class it varies from a small seam of gouge matter to a well defined vein over two feet in thickness but as far as the workings have opened it, it has not pinched entirely out.

Character and occurrence of ore, The ore found in this vein is principally copper glance or chalcocite, one of the richer sulphides of copper, carrying values in gold and silver, with carbonates of copper showing throughout the vein matter and often in a less degree impregnating the adjacent limestone.

The copper glance is found in bunches and streaks, scattered through the vein matter in an irregular manner and varying in size from a mere speck to a mass of several hundred pounds in weight of nearly pure glance assaying high in copper.

This condition is noted as extending to the depth and extent shown by the present workings, especially in the 34 ft. winze.

Development,	1Shaft (not used,)	100 feet, size,
	1Tunnel	32 feet, size,
	Cut	feet, size,
	3Drifts	45 feet, size.
	Upraise	feet, size.
	1Winze	34 feet, size,
	Stope	feet, size,
Total development,		311 lineal feet.

Ventilation, By air pipes and tunnel vent.

Exits and fire protection. As the work is in prospect stage, special arrangements are necessary.

These claims lie on the south-west slope of Elk Mountain, which, as stated is an uplift of granite and schist of considerable extent.

Lying on these rocks is the limestone noted above and having a dip to the west and also showing a more or less fractured condition.

This condition is further increased by a second and smaller uplift of schist, diorite and similar rocks that occurs near the foot of the mountain, immediately west of the present workings and which cuts through the lime formations, leaving a portion of this lime lying between the greater and lesser uplifts, and it is in this portion that the present workings are situated.

As previously stated, the ore is found in the manner described in the fractures immediately adjacent to the western edge of this lime and near the contact between this lime and the rocks of the lesser uplift. The vein has a northerly and southerly strike with a varying dip to the west, apparently heading towards the above contact and increasing in degree as depth is gained.

It is considered that these veins and stringers showing ore are all connected with the main contact above described and that the main ore may be looked for on or near this contact.

This prospect is unique in the Encampment district but as the most profitable properties in this district have been found on the contact between the schists and other formations, and when the present showing is considered, it is evident that the indications are favorable for finding ore in quantity and to warrant further work as above.

The present workings consist (on the vein) of a tunnel, winze and drifts, following the trend and dip of the vein, and it is from these workings that the ore shipped has been taken out during the progress of the work without stoping and roughly sorted to the grades shown in the smelter receipts of the Company, which show shipment of 31491 pounds of ore containing 4330.21 pounds of copper worth \$492.02. This ore could have been made much higher in grade by closer sorting, as much of the glance is very high grade but this may be taken as a fair average of these ores as taken from the mine.

It is considered that this work has been done in the manner best suited to the conditions encountered and it is recommended that this be continued by sinking the present winze on the vein to the above contact

or until a radical change is noted in the ore occurrence and it is found in quantity sufficient to warrant permanent work.

Other showings of copper are noted on these claims, especially on the schist leads north-west of the main workings on the Azurite claim and these indications show the same surface characteristics as in other parts of the Encampment district and indicate a general mineralized condition that promises well when worked.

These claims are well watered by several streams and springs and power could be developed at convenient points when needed. Pass Creek offers abundant water for any works contemplated and the general location and topography of the claims are favorable for economical working on a commercial scale.

Timber is abundant on the group, some 200 acres being covered with timber suitable for all purposes.

Surface improvements consist of bunk houses and stable conveniently located and tunnel house at the workings containing a horse whim and other mining materials sufficient for considerable further development.

I consider this a good prospect and that the showings fully warrant further development.

Respectfully Submitted,



State Geologist of Wyoming.

Date of Examination,  
July 11th, 1902.